



APRIL 1987

COLORADO SPRINGS,
COLORADO



PIKES PEAK RADIO AMATEUR ASSOCIATION, INC.

P.O. Box 16521
Colorado Springs, CO 80935

FIRST CLASS MAIL



Ø BEAT



P.P.R.A.A. DIRECTORS

PRESIDENT	Don Hohisel KEØGJ 1207 Whitehouse Dr. 80904	520-9955
V. PRESIDENT	Ron Deutsch NKØP 6050 Del Paz Dr. 80918	593-8352
SECRETARY	Al Vrooman NØCMW 1341 Diana Ln. 80909	473-1660
TREASURER	Bud Libengood NØDDE 1596 Westmoreland Dr. 80907	599-7699
Board Member	Jim Sorrells WA9ABB 6575 Lange Dr. 80918	598-7543
Board Member	Phil Somers VE1ARC 1075 Allegheny Dr. 80919	590-7136
Board Member	Nick Hulbert KG5N 4745 Brown Valley Ln. 80907	593-8603
Board Member	Chris Smith WBØDHU P.O. Box 16397 80935	495-0624

* Denotes 2 year term beginning October 1986

ZERO BEAT is published monthly in the interest of the members of the Pikes Peak Radio Amateur Association, Inc., P.O. Box 16521, Colorado Springs, Colorado 80935. Cost is 50¢ per month for non-members or a \$4.00 per year subscription. Permission is given to reprint articles or excerpts provided credit is given. Deadline for submission of articles is the 21st of the month. Classifieds accepted anytime.

The Pikes Peak Radio Amateur Association meets on the second Wednesday of each month at Giuseppe's Depot Restaurant at 10 S. Sierra Madre at 7:30 p.m. All amateurs and interested parties are invited to attend.

Editor: Phil Somers VE1ARC, 1075 Allegheny Dr. Colorado Springs, CO 80919 590-7136

PPRAA SWAPFEST 87

May 16th will be here sooner than you think. The swapfest is shaping up real well. The flyers are printed and distribution has started. We are mailing almost 600 flyers to local hams who are not club members. Advertisers helped defray printing expenses this year.

The Grand Prize is an Icom 735 HF Transceiver/General Coverage Receiver. Raffle tickets are \$1.00. Wouldn't that make a nice addition to your shack?

Al, NØCMW, is the table reservation chairman. There are a limited number available, so better make your reservation early.

With profits of the 86 raffle, PPRAA was able to donate a Ringo Ranger antenna system to the ARES hospital project, two sets of ARRL books to the Colorado Springs Public Library, and obtain a nice emergency generator for the club.

Last years swapfest was a success, thanks to the great support of our membership. 87 should be even better, but once again the outcome will hinge upon your support.

P.S.

For those who have already started selling raffle tickets, it would be appreciated if you could turn in the stubs and whatever money you have already collected at the next club meeting.

73 w. Jim WA9ABB



Ron, NKØP was first licensed in 1979. His first rig was a Heathkit 1680 CW only transmitter, and a Radio Shack OX 302 receiver connected to an inverted Vee for each band. Ron's first contacts were made on 10 meter and 40 meter CW. During the Falklands war, he worked a station in the Falklands on 10 meters. His best DX was a 2 meter 958 QSO from Colorado Springs to Vancouver, BC in the summer of 1985. He worked 12 states on aurora in Feb 1986 on 144.2 CW. Ron's current interests include 1296 MHz, 10 GHz experiments and 432 MHz. He has a 55 element yagi on 1296 and a 30 element yagi on 432. Ron is an avid VHF/UHF contester. He won the last three Rocky Mountain Division January VHF contests, and the last two Division UHF contests.

"VIEW FROM THE PEAK"

by George Hinds, N8CIX

NOVICE ENHANCEMENT - A 220 EXPLOSION?

Now that Novice licensees can use all modes on 220 MHz, from 222.1 to 223.91, it's almost a sure bet that they'll be showing up on 220 repeaters in large numbers. They can operate on the entire repeater segment as they can listen to outputs falling above 223.91 to the top of the band. In an electronics store on a recent trip to Denver, where before I had seen no 220 mobile rigs, this time I observed 5 new Icom 38A's. Repeaters on 220 along the Front Range, "poor relations" alongside their 2M and 440 cousins, could sprout with users now. What will the newcomers find as to range, etc.? From experience, and given the same location, I'll venture to say they'll quickly note that 220 has the best features of 2M and UHF: 2M range and 440 MHz "penetration."

Now that Novices can more freely join the mainstream of amateur radio, perhaps so many won't drop out after a few months as has been the case heretofore (from 10/01/85 to 10/01/86 21,000 licenses were not renewed). With voice and digital modes available, novice enhancement might attract and retain necessary "new blood" to keep amateur radio growing.

Another benefit: stronger representation of amateur radio to the public, politicians and government, not alone by individuals but by increased membership and thus support to strengthen the ability of the ARRL to more effectively represent the interests of amateurs.

An influx on 220 MHz by Novices should produce a most welcome group able to participate in public service projects; where a 220 repeater is available, it can be used alone or by linking to other systems on 2M or 440, thus taking advantage of amateurs willing to participate.

Another point to consider: often we want non-amateurs to listen in when we're doing some public service projects - it's one way to whet their appetites to become a part of ham radio, and it also lets the

public know what we are doing to serve our communities. However, there are times when we prefer to keep a specific project under cover - and that's when 220 is superior: used for public service projects where, for example, money is to be collected for charitable or research funding (Heart Fund, MS, etc.) or in search and rescue efforts, non-amateur "eavesdroppers" are blocked out - few scanners cover 220 MHz.

The dark side of the picture today is the proposed turnover of a part of the 220 band to land mobile service by the FCC. No matter that the Commission just took a step to swell the use of 220 by amateurs, their next move is directly out-of-phase. It's a classic case of convoluted thinking in my opinion (2 MHz is so little a slice of spectrum for development by land mobile) and it hopefully will be rethought by the Commission upon reviewing the facts of the situation. While April 6th was the deadline for comments on the matter, ARRL has requested an extension of time. I've filed my response; I hope that you have, too; if you haven't, and an extension is granted, please do; helpful information on formulating your comments appears in the April issue of QST.

Amateur radio could be on the verge of the greatest period of growth ever. By extending friendship and assistance to Novices when we contact them, we will be contributing to the growth and influence of amateur radio. That's a worthy objective - and especially so as competition heats up for available spectrum space.

IT TAKES A WHILE TO WEAR OFF: THOSE OLD "CHANNEL 19" HABITS...

Ever wonder where hams who use the following were recently operating? "What's the Personal there?" and "You gotta copy?" and a blood-curdling "Break!" (instead of simply stating their call to enter the conversation.) Perhaps the fault is not theirs - maybe their "Elmer" overlooked teaching the accepted operating procedures for FM and repeaters.

Don't forget: comments on the FCC inquiry as to issuing special callsigns in addition to a presently held callsign are due by April 23rd. See April QST...

220 MHZ IN COLORADO SPRINGS?

IT'S ALIVE AND WELL, THANK YOU!

While there has been a repeater on 220 serving Colorado Springs for quite some time, recently a change of site for the system has greatly improved coverage.

Now the folks coming on the band here will find a good system serving the city when they're using 10-25W mobiles and even walkie-talkies are performing quite well. From user reports, the system is workable north on I-25 to Monument Hill, west up Ute Pass to Woodland Park, south to Canon City, Florence and Pueblo, and east out to the county line.

The repeater is under the call WQNR and the frequency is 223.22 in, 224.82 out. At this time, the system is located several miles east of the airport, using a 4-bay dipole antenna but will be changed to a dual 5/8ths at a higher point on the tower in the near future, hopefully improving coverage in all directions.

The repeater is carrier-operated and open to all amateurs [novices are most welcome, of course, consistent with the Novice Enhancement program]. If you're looking for good communications on a band that is not only as yet uncrowded in the Rocky Mountain states, but also semi-private. try 220 MHz - you'll find it really works!

73, George Hinds, N8CIX

FOR SALE: Kenwood TR-2600A HT with 2 battery packs, custom hard leather case, wall charger -- like new; contact George Hinds, N8CIX at 687-2610.

WANTED

- 220 MHz HT
- SWR Meter for HF
- Antenna Tuner for HF

Paul - KA0VBO - 550-1281
Before 12:00 AM or after 7:30 PM

HAFT LICENSING

VE Program, Colorado Springs

VE testing for the purpose of obtaining or upgrading an Amateur Radio Station /operator license, sponsored by the Pikes Peak Radio Amateur Association, will be conducted on 16 May 1987 at the RUSTIC HILLS MALL, 3955 Palmer Park Blvd. (corner of Palmer Park and Academy Blvd), Colorado Springs, starting at 9:00 A.M. PRE-REGISTERED applicants and WALK-INS are welcomed.

Instructions:

- PRE-REGISTERED Applicants must mail:
 - Completed current FCC form #10.
 - Photocopy of current license.
 - A check or money order for \$4.35 payable to ARRL/VEC.
 - The above must reach KDØEL by 9 May 87. Send application to:
MAX STAFFORD - KDØEL
6580 Snowbird,
Colorado Springs, CO 80918
- WALK-INS must bring to test site:
 - If currently licensed, your current license.
 - A photocopy of your current license.
 - A check or money order for \$4.35 payable to ARRL/VEC.

NOTE: All applicants will be required to provide photo proof of identification at time of examination.

Handicapped applicants should notify the test contact immediately so that appropriate procedures can be coordinated.

For further information, please contact either Max Stafford KDØEL 590-9849 or Peter LaFosse NØLA 495-4829.

Membership in PPRAA or the ARRL is not a requirement for taking the above test.

Talk-in will be on the 146.37/97 repeater.

ARRL RENEWAL

If you are renewing your ARRL membership, please do it through the Club because we get a benefit for each renewal or new membership.

VHF & ABOVE NEWS

by NKØP

The Front Range Microwave group met in Denver on 21 March. KØRZ showed us his new 10GHZ (thats right 10GHZ) XVERTER and we had a chance to find out what everyone has been doing lately on 1296MHZ and up. About 20 hams attended including four from Colorado Springs. The date of the next meeting has not been set.

After what seemed to be years the SSB Electronics 10GHZ Transverters have begun to trickle into the USA. I had a chance to examine one and they are truly a work of art! Start with a 144MHZ IF use a 2.4GHZ LO multiplied X4 to get you to 10.224GHZ. The unit uses high quality teflon boards and GASFETS to achieve 200mw output. (This may not seem like much but my wide band units output is 7mw) There are four units in Colorado now so the first SSB and CW QSOs should be made shortly.

If you cant live without one sent \$649 to Transverters Unlimited Box 6286 Station A Toronto, Ontario Canada M5W 1P3

The April Lyrids Meteor Shower will peak on 4/22/87 at 0119 UTC +or- 12hrs.

The worlds fastest IC, a GaAs chip that runs at a clock rate of 12 GHZ has been built by Hughes Aircraft. Can anyone get me an engineering sample to play with?

100 Years ago today the Edison Light Co. closed a contract for electric lighting in Tokyo, Japan. The central station had to supply several thousand lights which were used to light up Mikado's Palace.

PPRA has invited KØRZ down to the May club meeting to talk about getting on microwaves. If your curious about what equipment is like at frequencies above 1000MHZ be sure and plan to attend.

If your interested in whats going on VHF+ in other parts of the country try one of these newsletters:

220 NOTES

Walt Altus WD9GCR

W 6539 Birch St.

Onalaska, WI. 54650

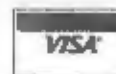
Midwest VHF Report

3451 Dudley St.

Lincoln, NE. 68503

Thats it for this month. Hope to see some of you at DAYTON 87 73's C U on the bands

Ron NKØP



COLORADO SPRINGS Walker Electronics Inc.

2820 N. PROSPECT, COLORADO SPRINGS, CO 80907
PHONE — (303) 636-1661

**WHOLESALE DISTRIBUTORS OF ELECTRONIC
PARTS, SUPPLIES AND EQUIPMENT**

BUTTERNUT
HUSTLER
CUSHCRAFT
LARSEN
ANTENNA SPEC.
UNIDEN

WELER
FLUKE
BELDEN
AMPHENOL
MFJ
B & W

ARRL BOOKS
SAMS BOOKS
TRIPL LITE (power supplies)
VAN GORDEN
BENCHER

FOR SALE

4 BE Master Series VHF (50 or 80 watts)
\$75 each

12 BE Executive Series VHF (35 watts)
\$125. each

3 Motorola Notrack VHF (60 watts) 12V
mobiles \$50 each

Will consider trades.

Wanted: 2 meter synthesizers

Don - KEØBJ - 520-9955

BORGER, TEXAS SNAP FEST - 24 May

Bunavista Community center. Sunday 8AM-3PM. Admission \$3.00. Tables \$3.00.
Talk-in on 147.90/30
For info, call:

Jim, KA5VVB (806) 274-4748
or Fred, N85T (806) 878-3129

ANOTHER WARC? WHAT ABOUT 40 METERS?

by Carl W0BWJ

Perhaps you remember that WARC-79, held in Geneva Switzerland six and a half years ago provided the Amateur Service with three new high frequency bands and a new approach to satellite/space communication. That's fine, so why have another? Somebody told you that there was another WARC called HFBC, but it didn't seem to concern ham frequencies, did it? Why get excited about it?

Now for the answers. First - WARC was not the acronym for World Amateur Radio Convention; it was/is the abbreviation for World Administrative Radio Conference. It concerns the radio spectrum from VLF to SHF and beyond and it provides the "real estate" for fixed services; land and maritime mobiles; broadcasting; aeronautical navigation; industrial, medical and scientific study; satellite communications; and numerous others in addition to amateur authorizations. Yes, there was just recently concluded a High Frequency Broadcast Conference and the subjects discussed were signal to interference ratios, desired 30 db signal strength, allocation of frequencies for both AM and SSB modes, and other similar matters that are of vital importance to the broadcast service (not only the AM and FM bands you copy locally, but the international shortwave bands that are the territory of Voice of America, BBC, Radio Moscow) and the need for every nation to have an equal share in the right to sell its philosophies.

HFBC-1 was convened in 1984 as a result of the inability to solve the problems during WARC-79; it was not successful and HFBC-2 was held in Geneva from February 2 to March 8, 1987. Whether HFBC-2 could be considered a success or another failure is similar to the optimist/pessimist description of half a glass of a favorite beverage - is it half full or half empty? It did not solve the interference problems to every country's satisfaction, it did not address the matter of malicious interference, and it did not have the authority to consider new frequency spectrum space to relieve congestion. If that is so, then what did it do?

After the broadcasting delegates argued among themselves over "who was QRMing whom" (doesn't that sound

familiar) and why each one needed a "clear frequency" (another familiar complaint), splitting up into bloc pressures, and generally wasting time, the Amateur Service was able to pull an end run and get some stronger language into the provision known as Resolution 641 - that which provides exclusive amateur occupancy of 7,000 to 7,100 (even though it doesn't sound that way now).

Thanks to some careful preparation by the International Amateur Radio Union (IARU) that started way back in the middle sixties, the Amateur Service has friends in many (but not all) of the delegations of countries that attend the International Telecommunications Union conferences. In many cases, there are active amateurs who are also members of the delegations; when that is not the case, IARU has been able to make a convincing case for support of amateur operation to the extent that non-licensed delegates know and support the most important amateur issues. Amateur performance during national and international emergencies has proven of such value that it is no longer considered just a "playground for people with expensive toys".

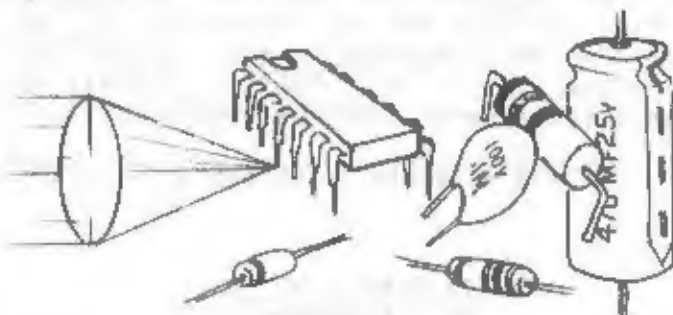
That's enough background about a boring conference, what about 40 meters? The "end run" previously mentioned was the preparation and acceptance of some additional language to Resolution 641 which states unconditionally that the broadcasting service shall be prohibited in the 7.0 - 7.1 MHz portion of the band, that stations operating on frequencies in this band shall cease operation immediately, and that administrations responsible for such operations shall take steps as necessary to comply with the regulations as stated.

Ok, but what about all the broadcast QRM heard above 7.1? Only in Region II (that's North and South America) is broadcasting prohibited between 7.1 and 7.3 MHz, and then only if it is "directed to the Region II area". When Radio Lower Slobbovia opens up with a half-million kilowatt signal, it is going to have a few side lobes that will just happen to stray into Region II, even though its primary target is alledged in either Region I or Region III. At least that is the excuse given to the ITU when complaints are registered. Hopefully, but probably not too successfully, that situation might be partially corrected

OEM PARTS

204 Mount View Ln., Unit 1
Colorado Springs, CO 80907
303-531-9515

Optical - Electronical - Mechanical Parts
Buy -- Sell - Trade - New & Used Surplus Items



SEE DICK PEACOCK OR BOB TAYLOR

KABYPL

"ASK ABOUT OUR HAM'S DISCOUNT"

through the encouraged use of better directional antennas, etc. Unfortunately, there is no international police force to strictly monitor and enforce the band occupancy provisions and the restrictions imposed on "directional broadcasting." Adherence to the international regulations is more a matter of honor than strict enforcement; if an administration ignores the agreed rules, there is no court of justice to take the violating station(s) off the air. Complaints can be filed with the proper department of the ITU and notices can be given to the offenders but there is no authority to confiscate and impound.

As satellite service expands and becomes available to the emerging (3rd world) countries and when the use of 988 makes more spectrum space available on the existing broadcasting bands, a portion of the existing problems will be corrected. Until then, however, the Amateur Service must continue to be vigilant and build a record of public service which will support its right to "own" exclusive segments of the crowded frequency spectrum. The next general WARC, whether it is called in 1997 or after 2007 will be a day of reckoning -

let's be ready to defend and maintain our spectrum real estate!

Carl Smith W8BWJ,
Vice President, IARU
1070 Locust Street,
Denver, CO 80220

APRIL MEETING

The next regularly scheduled meeting of the Pikes Peak Radio Amateur Association will be held on Wednesday, April 8 at 7:30 PM at Giuseppe's Depot at #10 S. Sierra St. The program is 220 and Resote by Chaz W8OCJ



Rick, WB7THT was first licensed in 1966 as WN7GCJ. His first rig was a homebrew 40 meter crystal controlled transmitter into a dipole, with an NC 300 receiver. He later upgraded to an EICO 720 transmitter. He was re-licensed in 1977 as WB7THT. His best DX was an Adelaide, Australia station for 1.5 hours on 10 meter CW in 1979. While in Germany, Rick built a homebrew, circularly polarized 2 meter antenna to try to work W5LFL on the Shuttle Columbia. Heard him but didn't have enough power to overcome stations in surrounding countries. Rick is currently running a Yaesu FT-301 and a Cushcraft vertical. He recently added RTTY gear. Rick still prefers CW. His future plans include building a 160 meter antenna to try out that band, and getting some DSCAR gear.

Kantronics/YAPP Compatibility
by Keith VE3PDD

For those of you that use the Kantronics KPC-1 or KPC-2 and the YAPP software, you are no doubt well aware of the problems encountered when trying to download binary files using the YAPP protocol. After some experimentation, I believe I have found the cause of the problem and can suggest a fix that will allow you to enjoy the binary upload/download capability that the YAPP program offers!

After some downloads, it was quickly evident that the downloaded files were being corrupted in some manner by the Kantronics TNC. I was able to determine as well that all my uploads were not corrupted (at least the problem was only going one way). Using the file comparison utility I noticed that the TNC was stripping off the 8th bit (MSB) and making it into a mark (0) condition, in other words it would not pass a value greater than 7F hex.

To remedy the situation, all one has to do with the Kantronics TNC is to set the PAR (parity) parameter to "4". This tells the TNC not to alter the 8th bit and let it be passed to the terminal as it was received over the radio.

To allow the Yapp program to work with the Kantronics TNC one must also alter the TNC type which is contained in the third line of the Yapp configuration file (called YAPP.CNF). Failing to do so will not allow the Yapp program to smoothly transition the TNC to and from the CONVERSE / TRANSPARENT mode when binary file transmission using the Yapp protocol is desired.

In my experimentation with the Yapp program I have found that during the binary file uploads and downloads, it is very sensitive to background programs running in your system. In my particular case, I was running a screensaver program in the background and during a long download, the screensaver kicked in and promptly aborted the download. To get around this there are two options: one being to incorporate a longer timer before the screensaver kicks in or in my case, create a batch file that disables the

screensaver and any other programs that would be running in the background before executing the Yapp program and then to re-instate them upon termination of the Yapp program.

After implementing this fix I have downloaded several files in the .ARC and .COM format and all have been successful in program execution and file de-arc'ing. I would be interested in hearing from anyone who has been experimenting with this program and a Kantronics TNC as to how they are progressing. I can be reached on the local PBBS by addressing your comments to VE3PDD @ NBOBLV.

73 -- Keith -- VE3PDD

Do You Need a Hot Rod?
by Jim WA9ABB

How many times have you run into the situation where your two meter H.T. with its rubber duckie just couldn't cut the mustard? I recently started monitoring 146.52mhz from my office with my H.T. Reception was marginal at best.

The solution - the AEA Hot Rod 1/2 wave antenna. Does it work? You bet! There was a marked improvement in reception. The antenna also showed an increase on a relative strength meter. The rubber duckie gave a reading of about one unit and the Hot Rod gave a four unit reading. Although this was not a lab quality test instrument it did give a rough idea of the improvement in rf output.

The Hot Rod may allow you to bring up the repeater from an otherwise non-accessible location. It is cheaper than a power amplifier and does not consume precious battery power. I am able to access most of the local repeaters with 100 milliwatts. But everything has a price. The Hot Rod is more awkward than the rubber duckie and it may put a strain on the H.T.'s antenna connector.

The Hot Rod is a well made telescoping whip antenna that sells for about \$20. It is a nice accessory that you may find useful in some situations, even if you do not want to use it all the time.

73's, Jim WA9ABB

Rocky Mountain Area's
largest distributor of

HAM GEAR

DRAKE
YAesu
KONPRO
HY-GAIN
BENCHER

MIRAGE
LARSEN
CUSHCRAFT
ANTENNA SPECIALISTS
HUSTLER

DAIWA
VIBROPLEX
PALOMAR
ROHN
WIL N.YE
B & W



GEORGE
KDØRW

RUTH
W6MCPY

Electronic Sales Co.

800 Lincoln Street 832-1111

In Colo.-1-800-525-6342

FOR SALE

Famous WW II prop pitch motor (one of the best beam rotors ever available). Motor, D.C. power supply, control panel and selayn indicators. \$75 pick-up only.

WW II BC 3840 receiver. Range 200 to 500 KHz, 1.5 to 18.0 MHz. Condition new. Receiver, A.C. power supply, speaker. \$75. pick-up only.

G. Flynn W6MHV 635-1909



Jake, N6CYR was first licensed in 1953. He started out with a homebrew transmitter and a 8-38 receiver operating into an inverted-L antenna. Most of his early operation was on MARS, to and from state-side stations. He enjoys 10 meters and is a Ten-Tenner. His best DX was with a girl named Jane in Mildura, Australia but he has forgotten her call??? Jake's current interests are HF and 2 meters, mobile, portable and fixed operations, primarily oriented towards ARES. He has been deeply involved in the hospital antenna project. One of his favorite pastimes is mobiling to Dayton for the Hamvention.

MINUTES OF MARCH GENERAL MEETING
submitted by Al N6CMW, secretary

The general meeting of the Pikes Peak Radio Amateur Association was held at Giuseppe's Old Depot Restaurant, Wednesday evening 11 March 1987. The meeting was called to order by the president Don KE6BJ at 19:30. Don asked all those present to introduce themselves. There were 58 members and 14 guests present. The minutes of the previous general meeting and board meeting were approved as printed in Q-Beat.

Committee Reports

Note! Anyone wishing to help out on any of these committees, please contact the chairman at the phone number listed. Thank you for your support.

```
*****
*****
*****
***                                     ***
**      GATEWAY ELECTRONICS      **
*                                     *
*      "Gateway's Got It"        *
*                                     *
*      5115 N. Federal Blvd. # 32  *
*                                     *
*      Denver, CO 80221           *
*                                     *
*      This coupon worth $2.00 off next *
*      $15.00 purchase.           *
*                                     *
** Call 458-5444 for info/directions **
***                                     ***
*****
*****
```

Treasurer - Bud N0DDF (599-7699):
 Previous balance,.... \$882.19
 Income,..... \$186.15
 Expenses,..... \$337.90
 Balance,..... \$730.44

Interference - Ron NK0P (593-8352):
 The committee identifies RFI but does not fix it. Would like to find some authorized repair facility that would, for a fee, try to fix the problem.

SwapFest - Jim WA9ABB (598-7543):
 Rustic Hills Mall, Saturday, 16 May 87.
 Raffle tickets on sale now. Table reservations at \$8. now, \$10. at door if available. See Al, N0CMW 473-1660 for table reservations. Grand prize: ICOM IC-735 HF/General Coverage transceiver.

Pikes Peak Hill Climb - Malcolm KE9B (488-2071):
 Passed around a sign-up sheet/questionnaire. See Malcolm for further info.

Education - Les KC0NC (634-3995):
 Have about 11 students in the Tech General Update class. Novice class date not yet confirmed but may be right after the swapfest.

Publicity - Rick WB7THI (599-7655):
 Preparing a letter of introduction for club to local media. Looking for club banner.

Colorado Council of Amateur Radio Clubs (CCARC) - Bud N0DDF (599-7699):
 Report on last CCARC meeting in Denver in Feb. Pres is Whit Brown, vice Pres is Darla Richardson. They keep stolen equipment list. CCARC rewriting by-laws. Involved with State Amateur Radio Emergency Service (SARES).

Deaf and Blind School - Jim WA9ABB: (598-7543)
 Thanks to Chris WB0DHU for his help. Chris to be an Elmer for a D&B student.

Ø-Beat - Phil VE1ARC (590-7136):
 Thanks to all those who helped get Ø-Beat mailed when Phil was away. Specific thanks to Al N0CMW for all his help.

ARES - Jim WA5BKK: (579-9129)
 Outlined the purpose of ARES and has application forms.

Centennial ★ ★ REAL ELECTRONICS

2324 East Bijou, Colorado Springs, CO 80901
 PHONE: (303) 633-4664

COLUMBIA
 ELECTRONIC CABLES

Weller® Xcelite®

SPRAGUE

GC
 ELECTRONICS

SIMPSON METERS

Chemtronics Inc.,



SOAR

VIZ

Mfg. Co.

TEST INSTRUMENTS

TECH
SPRAY

ARRL

Howard W. Sams

Largest Supply of Electronic Parts
 in Southern Colorado



TAB BOOKS

Public Service - Mike K0TER (636-1290):
 Need more help for the "WALK FOR MANKIND" on Saturday 11 Apr, and "WALKAMERICA MARCH OF Dimes" on Sunday 26 Apr.

Club Trailer - Pete N0LA (495-4829):
 Have finished redoing the interior and making an operating table. Need folding chairs. Need 6x8 carpet. Thanks to Frank KL7IPV for help. Need welder to mount antenna base.

Field Day - Tom AD0D (495-2788):
 Vote on location favored Rampart Range site. Need help to set up and operate. Need volunteer to organize solar station.

VE Testing - Pete N0LA (495-4829):
 Next session on May 16 at SwapFest at Rustic Hills Mall.

Old Business: Nil

New Business/Announcements:

Weather Spotters class at civil defense meeting room in basement of police station at Kiowa and Nevada.

Jim WA9ABB will try to have a slide show on the Dayton HamVention at Apr meeting, also at May meeting, depending on when he receives the slides from Dayton ARS.

Front Range Microwave Society will have meeting in Denver 19 March.

in NKØP needs PA system for SwapFest.

Don KEØBJ reminded members of the ARRL Letter concerning League's opposition to FCC proposal to commercial use of 220 band. Write a letter to FCC.

Don KEØBJ presented QLF keyer paddle to Don NL7CO.

There will be a prize for the member who sells the most raffle ticket.

Prizes - Ron NKØP:

If you want a club jacket, hat or nametag, see Ron.

Winners were:

NØCYR	Jake	ARRL Handbook
KAØZHO	Ron	\$10. from Centennial
NØCIX	George	Free raffle ticket
----	Lucy	Free raffle ticket
KDØNB	E.J.	Diagonal cutters
KQØH	Bill	Free breakfast Village Inn
KAØBAJ	Eleanor	\$10 from Wintronics
----	Karen	Membership for 1 year
----	Sherry	Free raffle ticket
KAØZHP	Shannon	Antenna book
KAØZFB	Charles	Three Relays from DEM

Program:

Brad KDØVM presented a fine program on Lightning Protection. He had lots of slides illustrating the best techniques to reduce the risk of damage due to lightning. Thanks Brad for a nice presentation.

The meeting was adjourned at 21:45. The next meeting will be 8 Apr 87.

MINUTES OF MARCH BOARD MEETING submitted by Al NØCHW

The board meeting was held on Tuesday March 17, at the QTH of Jim WA9ABB. It was on Tuesday due to the heavy snow fall on Monday. Present were Al NØCHW, Jim WA9ABB, Ron NKØP, Chris WBØDHU, Don ØGJ, Phil VE1ARC, Nick KB5N, and Bud ØDDF.

Discussions on programs for the club. Tentative schedule April: 220 and remote

by Chaz WBØOCJ, Mays VHF & ABOVE by Front Range Micro Society BILL KØRL, also VE update by MAX KDØEL. June: HILL CLIMB & FIELD DAY.

Treasury is low due to fact we have already paid for the grand prize for the Swapfest an Icom 735 HF rig. Authorized an additional \$50.00 for trailer improvements.

Swapfest flyers are printed and also letter to go to most all hams in local area who are not members of PPRAA. Have 450 tickets out, one third paid for already, will take them to Aurora Swap Fest March 29.

Working on place for picnic in Aug, time and place to be announced later.

Next club meeting April 8 and Board meeting will be at QTH of Phil VE1ARC on April 13.



COLORADO COMM CENTER



SIGN UP!
NEW DRAWING
EACH MONTH
FOR \$50!
in equipment
2/25, 3/28, 4/25, 5/29



FACTORY
AUTHORIZED
SERVICE!



WE
TRADE!



NO CITY SALES TAX!
WAREHOUSE PRICES!
WE SHIP DAILY NATIONWIDE.

SATURDAYS TIL 3
288 - 7373

525 E. 70th Suite 1W
DENVER, CO 80229

NEXT TO VALLEY HIGHWAY
1 MILE NORTH OF MERCHANDISE MART

MILEY'S RADIO

Jess KØTAA 719 W. 7th St. Florence, Colorado 81226 (303) 784-3040

Hours 8 to 6 Tuesday through Friday — Saturdays 8 to 1 — Evening Hours 7:30 to 10 (Call Ahead)

Closed Saturday PM, Sunday & Monday

Closed March 12-16 for Midland, TX and March 27-30 for Kearney, Nebraska

Closed April 3-6 for Mooreland, OK

NEW EQUIPMENT IN STOCK

New Kenwood TS 440S \$885 w/AT installed \$1020
 Kenwood TS 940S \$1735 w/ultra tuner \$1890 - 1 only
 Kenwood TS 430S \$699
 Kenwood TS 830S \$839
 PS 430 Power Supply \$154 - PS 30 \$144
 Kenwood PS 50 power supply \$189
 Kenwood AT 250 auto antenna tuner for 430S \$275 - 1 only
 Kenwood AT 130 tuner \$144 AT 230 Tuner \$199
 Icom 735 \$795
 Icom 745 \$883 Icom 751A \$1395
 New Yaesu 767GX goes everywhere, does everything \$1550
 Yaesu FT 257GX \$795 FC 757AT \$265 - 2 only
 Kenwood TH4000A 2m & 440 FM rcvr Sale \$495
 Kenwood TR 3600 440 MHz HT w/free extra battery \$319
 Kenwood TR 2600A new HT w/extra battery Sale \$269 closeout
 New Kenwood TR 751A 2 meter all mode w/Ga5Fet preamp \$525
 Kenwood TH31BT \$325 TH41BT \$235 TH205AT \$228 TH215A \$298
 Kenwood TH21AT \$190 TH31AT & TH41AT \$190 each - all with free extra battery
 Kenwood TM 2570A 70 watt 2 meter FM mobile \$435 Limited Quantity
 Kenwood TM 2550A 45 watt 2 meter FM mobile \$359 Limited Quantity
 Kenwood TM 2530A 25 watt 2 meter FM mobile \$325 Limited Quantity
 Kenwood 211A \$300 (1 only)
 Kenwood TM221A/42TA TBA Dayton - No Price Yet
 Santic 201 w/2 number memory dialer \$250
 Complete line of Tokyo High Power amps, preamps & tuners at lowest prices
 Santic ST442 - New 70cm HT - \$250
 New Icom 48A 440MHz \$395
 New Icom 28A 132-174 MHz scan/receive 25W \$369
 New Icom 28H same specs as Icom 28A w/45W \$389
 Icom u2AT \$284
 Icom 2AT HT \$238
 Icom 02AT \$299
 Icom 02AT w/BP 5 watt battery & wall charger \$339
 Icom 4AT \$293
 Icom 04AT \$375
 Icom 27A w/TIM \$349/Icom 27H w/TIM \$379
 Icom 47A \$439
 Icom 3200A 2 meter/440 dual bander \$495
 Daiwa Motors, Switches & Rotors - In Stock - The Daiwa rotor is great!!!
 Mirage Amps - Low Prices - In Stock
 New KØK FM 240 mini 25W w/TIM & LCD display, encoder/decoder TO 156 MHz receiver \$298
 w/o tone \$275
 Yaesu FT 209RH 5 watt FM HT \$265
 Yaesu FT 2700RH 2 m-70 cm dual bander full duplex \$479 (2 only)
 Yaesu FT 727R 2/70cm HT - New CPU \$398 Limited Quantity
 Yaesu FT 21R 2 Meter HT w/TT Pad \$265
 Yaesu FT 73R 70 cm HT w/TT Pad \$278
 Ten Tec Corsair II HF rcvr. \$1149
 Ten Tec Century 22 HF CW rcvr. \$349
 Special of the Month New Ten Tec TT920 Air Band HF 108-136 MHz AM \$375
 THL (Tokyo High Power) 35V 2/25 watt FM Amp Ga5Fet preamp \$84
 Astron PS - ALL AMPS - Low Prices - Astron RS 50 and V50 In Stock
 Now a factory dealer for Mosley antennas-Special prices until
 3/31-full line in stock, TA33 - \$220 CL33M \$275
 Butternut HF6V 80-10 mtr, vertical \$120 Butterfly beam \$180 HF2V \$115
 B&W AXS 160 shortened 160/30 mtr, dipole 95' long \$94
 B&W AXS 80 shortened 160/40/15 mtr, dipole 64' long \$94
 B&W AS 80 shortened 80/40/20 mtr, dipole 78' long \$94
 Weiz fast meters in stock - all power levels and frequencies
 New B & W V5 300 tuner-bast 300W tuner for the price! Special \$94
 Hunter 58TV & 6 BTV In Stock
 Ameritron Amplifiers - AL 80A - 1.3-500Z - In Stock \$695 AL84 4-6MJ6 \$375
 Ameritron remote antenna switch - RCS 4 & 8V - \$120
 AEA CP1/64 MBA Text Pac \$200
 AEA PK 232 data controller Internal HF/VHF modem \$305
 AEA CP-1 Computer Interface \$178

AEA PK64A w/HFM & long cord \$355
 AEA PK 64A w/o HFM \$255
 AEA PK 64 packet/cw/tty etc. controller \$200 - HFM \$95
 AEA PK 64 system w/HFM 64 installed \$310
 Kantronics KAM all mode controller
 CW/RTTY/ASCII/AMTOR or Packet \$275 (HF & VHF Packet)
 New in April - Kantronics KPC4 dual port simultaneous connects,
 digitizing & gateway on 2 VHF radio ports & RS 232/TTL port - Rec 220 MHz
 TX145 MHz - \$295
 All Kantronics controllers & interface units in stock at lowest prices.
 MFJ wce & dry dummy loads, tuners & keyers in stock
 MFJ 989 roller inductor tuner \$288
 MFJ 962 1.8 KW tuner-160 to 10 meters \$219
 MFJ 980 3 KW tuner \$175
 MFJ 1270 packet controller (TNC-2) \$120
 New MFJ 1274 HF/VHF switcheable packet controller \$148

USED EQUIPMENT

Kenwood TR 2400 - nice \$115
 Kenwood TS 520 \$325 firm
 Kenwood AT 250 auto tuners \$225
 Kenwood TR2600A \$195
 Kenwood TS430S w/AM/FM/Mike \$550
 Kenwood TR9000 2 meter all mode \$205
 Demo Kenwood TS 440S/AT CW-SD5B Filters/V5 \$1045
 Kenwood TX 830S - First & Second IF CW Filters \$725
 Kenwood VFO 230 digital - \$219
 Kenwood SP230 s/Filters - \$65
 Icom 2AT \$135
 Icom 02AT \$250
 Icom 02AT w/mod \$275
 Tempo 54 70 cm HT-very nice \$150 Tempo SS \$125
 Yaesu FT708R 70 cm HT \$185
 Yaesu 757AT auto tuner \$195
 Yaesu FT 101E \$325
 Yaesu FT 257GX - Nice \$695
 Yaesu FT 207R - Nice \$115
 Yaesu 208R 2 meter HT - \$150
 Yaesu FRC-7 General Coverage Receiver \$150
 Drake T4K \$100 - no P.S.
 Drake R4C rcvr. \$250
 Etec FR4 digital readout for Drake C line \$65 - w/R4C - \$300 for both
 Heath HR100 rcvr., HX11 CW txndr, HG108 VFO all in nice condition
 for a novice station \$100 for set
 Heath Twins - 301/401 all cables for transceive - good condition \$175
 Tokyo Hi Power 400L 500 Watt tuner/SWR \$150
 Tokyo High Power 160V 3/10 in 160 out amp w/preamp \$275
 Mirage B108 2 meter FM/SSB amp - HT or 10W in/80 out \$125
 Signal One - excellent condition - was Don Paynes personal radio.
 Mods by Cunningham \$725. Call for more info in this rg
 Complete Oscar station including amps/mast mounted preamps/rotors/AQP-1 antennas
 Call for more info.
 March 2000A Roller inductor tuner \$130
 Amp Supply LA 1000 NT - No tune amp - like new \$425

Wide selection of amateur antennas-base, mobile, HF, VHF, UHF at reduced prices. We
 stock most of the better antenna companies products.
 We carry a complete selection of books by ARRL, Ameco, and the Callbook.

Due to busy spring swapfest schedule, we were
 unable to get updated copy for this issue. Please
 call Miley's Radio for updated cost and
 availability information.

Membership Application

PIKES PEAK RADIO AMATEUR ASSOCIATION, INC.

P.O. Box 16521

Colorado Springs, CO 80935

Name _____

Address _____

City _____ State _____ Zip _____

Call _____ License Class _____

Are You An ARRL Member? ☐ Yes ☐ No Telephone _____

☐ Full Member \$12.00 ☐ Family Membership \$15.00 ☐ Newsletter Only \$4.00

☐ Age 65 or older, or under 18 \$8.00

Additional Names _____ Call _____ Class _____

Associate Member \$8.00 ☐ (Outside Teller & El Paso Counties.)